# Part 3: Indicators, Rankings, and Methods

## Indicator Definitions and Rankings

This section includes definitions for indicators in Part 2 of this report. See the Methods section for more on data sources and interpretation. In addition to indicator definitions, we report the five neighborhoods with the highest and lowest values for the indicator. The neighborhood with the highest value will be ranked first, even if higher values are not considered better, as with crime rates. Rankings are provided for the most recent year that data are available for each indicator. In the event of a tie, rank numbers are repeated. Where data are unavailable for a given neighborhood, we report rankings out of all neighborhoods for which the indicator can be calculated. Rankings are listed for community districts, though some indicators are reported at the sub-borough area level. See the Index of Community Districts for more information.

#### **Car-Free Commute**

This indicator measures the percentage of workers who commute primarily by foot, bicycle, or public transportation, as a share of all workers over the age of 16 who do not work at home. The types of transportation included as public transportation are bus, subway, railroad, and ferry boat. To be consistent with the way commute transportation modes are tabulated in the American Community Survey (ACS), public transit rates from the 2000 Census exclude those commuting by taxi. "Car" refers only to those using a personal motor vehicle other than a motorcycle.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

Geography: City, Borough, Sub-borough Area

2016-	2016-17				
Rank	CD#	Name	Value		
Highe	st				
1	MN 06	Stuyvesant Town/Turtle Bay	91.4%		
2	MN 04, 05	Chelsea/Clinton/Midtown	90.6%		
3	MN 09	Morningside Heights/Hamilton Heights	90.3%		
3	BK 06	Park Slope/Carroll Gardens	90.3%		
5	MN 10	Central Harlem	89.9%		
Lowes	st				
51	SI 01	North Shore	43.5%		
52	QN 11	Bayside/Little Neck	41.7%		
53	QN 13	Queens Village	40.0%		
54	SI 02	Mid-Island	33.6%		
55	SI 03	South Shore	24.3%		

#### **Foreign-Born Population**

This indicator measures the share of the population that is foreign-born. Foreign-born includes all those born outside the United States or Puerto Rico, regardless of whether they currently are United States citizens. Children born abroad to parents who are U.S. citizens are not counted as foreign born.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

2016-17				
Rank	CD#	Name	Value	
Highe	st			
1	QN 04	Elmhurst/Corona	62.3%	
2	QN 03	Jackson Heights	57.5%	
3	QN 07	Flushing/Whitestone	57.2%	
4	QN 02	Sunnyside/Woodside	55.6%	
5	BK 11	Bensonhurst	55.2%	
Lowes	st			
51	BX 10	Throgs Neck/Co-op City	20.7%	
52	BK 03	Bedford Stuyvesant	19.7%	
53	BK 02	Brooklyn Heights/Fort Greene	19.6%	
54	SI 03	South Shore	15.9%	
55	BK 06	Park Slope/Carroll Gardens	15.1%	

#### **Home Purchase Loan Rate**

#### (per 1,000 properties)

This indicator measures the home purchase loan rate by dividing the number of first-lien home purchase loan originations for owner-occupied one- to four-family buildings, condominiums, or cooperative apartments by the total number of one- to four-family buildings, condominiums, and cooperative apartments in the given geography and then multiplying by 1,000 to establish a rate. For more information on Home Mortgage Disclosure Act data, please refer to the Methods section of this report.

Sources: Home Mortgage Disclosure Act, New York City Department of Finance Final Tax Roll File, NYU Furman Center

Geography: City, Borough, Sub-borough Area

2016-	-17		
Rank	CD#	Name	Value
Highe	st		
1	BK 02	Brooklyn Heights/Fort Greene	33.1
2	BK 06	Park Slope/Carroll Gardens	31.8
2	SI 03	South Shore	31.8
4	SI 02	Mid-Island	29.3
5	SI 01	North Shore	28.2
Lowe	st		
51	BX 04	Highbridge/South Concourse	12.8
51	BX 09	Soundview/Parkchester	12.8
53	BX 03, 06	Morrisania/Belmont	12.7
54	BX 05	University Heights/Fordham	10.0
55	BX 01, 02	Mott Haven/Hunts Point	9.8

#### **Homeownership Rate**

This indicator measures the number of owner-occupied units divided by the total number of occupied housing units.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	SI 03	South Shore	81.8%
2	SI 02	Mid-Island	73.9%
3	QN 13	Queens Village	72.5%
4	QN 11	Bayside/Little Neck	69.5%
5	QN 10	South Ozone Park/Howard Beach	69.3%
Lowes	st		
51	BX 03, 06	Morrisania/Belmont	6.8%
52	MN 11	East Harlem	6.6%
53	BX 07	Kingsbridge Heights/Mosholu	6.4%
54	BX 04	Highbridge/South Concourse	5.7%
55	BX 05	University Heights/Fordham	2.8%

#### **Households with Children Under 18**

This indicator measures the percentage of households with children under 18 present.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

Geography: City, Borough, Sub-borough Area

2016-	-17		
Rank	CD#	Name	Value
Highe	st		
1	BK 12	Borough Park	44.4%
2	BX 01, 02	Mott Haven/Hunts Point	42.8%
3	BX 04	Highbridge/South Concourse	41.8%
4	BX 03, 06	Morrisania/Belmont	39.9%
5	BK 07	Sunset Park	39.6%
Lowes	st		
51	MN 08	Upper East Side	17.8%
52	MN 03	Lower East Side/Chinatown	14.0%
53	MN 07	Upper West Side	13.9%
54	MN 06	Stuyvesant Town/Turtle Bay	12.2%
55	MN 04, 05	Chelsea/Clinton/Midtown	9.3%

#### **Household Income Distribution**

This indicator measures the share of households with household income in one of six brackets: less than \$20,000, \$20,000-39,999, \$40,000-59,999, \$60,000-99,999, \$100,000-249,999, and \$250,000 or more. Household income is the total income of all members of a household aged 15 years or older. All figures have been adjusted to 2017 dollars. We report data from five-year American Community Survey estimates at the sub-borough level.

The U.S. Census Bureau advises against comparisons of income data between the decennial census and the American Community Survey (ACS) due to differences in question construction and sampling, and so we urge caution when comparing this indicator over time, particularly at the neighborhood level. For more information on comparisons across years and across U.S. Census Bureau products, please refer to the Methods section of this report.

Sources: IPUMS-USA, University of Minnesota, NYU Furman Center Geography: City, Borough, Sub-borough Area

#### Housing Choice Vouchers

#### (% of occupied, privately owned rental units)

This indicator measures the share of all rental households in privately owned units whose occupants use a housing choice voucher from the U.S. Department of Housing and Urban Development. Because tenants cannot use their vouchers to rent units in public housing, we report this indicator as a percentage of occupied, privately owned rental units. The denominator consists of occupied rental housing units (that is, rental households) from the American Community Survey (ACS) minus the total number of public housing units. For more information about the calculation of this indicator, see the "Housing Choice Vouchers" section of the Methods section. Due to inconsistencies in data collection and reporting before 2009 from the Picture of Subsidized Households, the source of housing choice voucher data, we do not present this indicator before 2009.

Sources: Picture of Subsidized Households, American Community Survey, New York City Housing Authority, NYU Furman Center

Geography: City, Borough, Sub-borough Area

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	BX 03, 06	Morrisania/Belmont	19.3%
2	BX 05	University Heights/Fordham	19.0%
3	BK 13	Coney Island	16.2%
4	BX 01, 02	Mott Haven/Hunts Point	15.3%
5	BX 07	Kingsbridge Heights/Mosholu	14.6%
Lowes	st		
51	MN 01, 02	Greenwich Village/Financial District	0.8%
51	QN 07	Flushing/Whitestone	0.8%
53	QN 02	Sunnyside/Woodside	0.7%
54	QN 01	Astoria	0.6%
55	QN 11	Bayside/Little Neck	0.1%

#### **Income Diversity Ratio**

This indicator measures the income diversity ratio by dividing the income earned by the 80th percentile household by the income earned by the 20th percentile household, excluding all households without positive income. For example, if the 80th percentile income is \$75,000 and the 20th percentile income is \$15,000, then the income diversity ratio is 5.0. A higher ratio indicates a broader spread of incomes. The income diversity ratio does not measure the distribution of income. To give a better sense of the distribution, each page also includes a chart showing the percentage of households in a given geographic area that fall into each of several income categories. The percentages in the charts may not add up to 100 percent because of rounding. *Sources: IPUMS-USA, University of Minnesota, NYU Furman Center Geography: City, Borough, Sub-borough Area* 

2016- Rank	17 CD#	Name	Value
Highe	st		
1	MN 07	Upper West Side	8.8
2	MN 03	Lower East Side/Chinatown	8.5
3	MN 04, 05	Chelsea/Clinton/Midtown	8.3
3	BK 04	Bushwick	8.3
3	BK 08	North Crown Heights/Prospect Heights	8.3
Lowes	st		
51	QN 02	Sunnyside/Woodside	4.1
51	QN 05	Middle Village/Ridgewood	4.1
53	QN 10	South Ozone Park/Howard Beach	3.9
54	BX 10	Throgs Neck/Co-op City	3.8
54	QN 13	Queens Village	3.8

#### **Index of Housing Price Appreciation**

#### (by housing type)

This indicator measures average price changes in repeated sales of the same properties. Because it is based on price changes for the same properties, the index captures price appreciation while controlling for variations in the quality of the housing sold in each period. The index is available for all properties, and is broken out for several types of properties: one-unit buildings, two- to four- unit buildings, buildings with five or more units, and condominiums. In Part 2 this report, we display the index for all property types combined and for the most common type of property sold since 2000. We do not report for geographies where there are too few sales of a particular building type to derive an index. Our estimate of sales occurring in 2017 include only sales recorded by the end of January 2018. This encompasses the vast majority of sales in 2017, but due to recording delays, this number may be revised slightly when complete data are available. For more information on the techniques used to calculate the index, please refer to the Methods section of this report.

Sources: New York City Department of Finance, Automated City Register Information System (ACRIS), NYU Furman Center Geography: City, Borough, Community District

## Interpreting Changes in the Index of Housing Price Appreciation

Because the index of housing price appreciation is normalized to be 100 in the base year, one should be careful in interpreting differences in index levels. A difference in two index levels only gives the change in terms of the base year. The percentage change between two years can be calculated by the formula

> HPl<sub>year1 –</sub> HPl<sub>year0</sub> HPl<sub>year0</sub>

For example: The index in 2007 was 192.9 for Manhattan community district 8 (Upper East Side). In 2017, it was 246.95. So the index was 54.05 index points higher in 2017. This does not mean that the value of the average property went up by 54.05 percent. Using the formula above, we see that the home appreciated by 28 percent between 2007 and 2017:

#### 246.95 - 192.9 192.9

In addition, be careful not to draw incorrect conclusions when comparing the index across different geographies. Because the index measures changes in prices relative to the base year, it does not reflect differences in current values. For example, the Upper East Side had a lower index level than Lower East Side/Chinatown in 2017. This does not mean that properties in the Upper East Side are less valuable than those in Lower East Side/Chinatown, but rather that Upper East Side properties experienced a more modest increase in value since 2000.

#### All Property Types

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	MN 09	Morningside Heights/Hamilton	620.3
2	MN 12	Washington Heights/Inwood	600.7
3	MN 10	Central Harlem	591.8
4	MN 11	East Harlem	458.1
5	BK 06	Park Slope/Carroll Gardens	450.4
Lowe	st		
55	QN 14	Rockaway/Broad Channel	200.2
56	BX 10	Throgs Neck/Co-op City	196.2
57	QN 12	Jamaica/Hollis	188.9
58	BX 12	Williamsbridge/Baychester	186.5
59	BX 03	Morrisania/Crotona	183.7

#### 1 Unit Buildings

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	MN 09	Morningside Heights/Hamilton	1,292.3
2	BK 08	Crown Heights/Prospect Heights	737.4
3	BK 01	Greenpoint/Williamsburg	593.0
4	BK 09	South Crown Heights/Lefferts Gardens	521.7
5	MN 10	Central Harlem	460.9
Lowe	st		
50	BX 09	Parkchester/Soundview	192.1
51	QN 12	Jamaica/Hollis	187.2
52	BX 12	Williamsbridge/Baychester	186.6
53	MN 08	Upper East Side	186.1
54	BX 06	Belmont/East Tremont	161.8

#### 2-4 Unit Buildings

2016-17				
Rank	CD#	Name	Value	
Highe	est			
1	MN 12	Washington Heights/Inwood	764.5	
2	BK 01	Greenpoint/Williamsburg	621.5	
3	MN 09	Morningside Heights/Hamilton	588.3	
4	MN 10	Central Harlem	573.7	
5	BK 02	Fort Greene/Brooklyn Heights	492.8	
Lowe	st			
52	QN 12	Jamaica/Hollis	192.9	
53	BX 07	Kingsbridge Heights/Bedford	188.9	
54	BX 06	Belmont/East Tremont	186.5	
55	BX 12	Williamsbridge/Baychester	179.5	
56	BX 03	Morrisania/Crotona	157.5	

#### 5+ Unit Buildings

2016- Rank	-17 CD#	Name	Value		
Highe	Highest				
1	SI 02	South Beach/Willowbrook	1,054.9		
2	BX 01	Mott Haven/Melrose	861.1		
3	MN 03	Lower East Side/Chinatown	802.9		
4	MN 10	Central Harlem	798.8		
5	MN 09	Morningside Heights/Hamilton	792.5		
Lowe	st				
51	BK 15	Sheepshead Bay	306.2		
52	BX 08	Riverdale/Fieldston	301.9		
53	BX 12	Williamsbridge/Baychester	285.5		
54	QN 14	Rockaway/Broad Channel	266.7		
55	QN 03	Jackson Heights	247.4		

#### Condominiums

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	MN 09	Morningside Heights/Hamilton	717.8
2	MN 10	Central Harlem	562.9
3	BK 08	Crown Heights/Prospect Heights	541.4
4	BK 14	Flatbush/Midwood	533.3
5	MN 12	Washington Heights/Inwood	520.7
Lowes	st		
51	BK 04	Bushwick	160.5
52	BX 10	Throgs Neck/Co-op City	150.1
53	BX 06	Belmont/East Tremont	144.3
54	BK 09	South Crown Heights/Lefferts Gardens	133.5
55	BX 04	Highbridge/Concourse	121.0

#### **Mean Travel Time to Work**

#### (minutes)

This indicator measures the mean commute time in minutes for commuters residing in the geographic area. The mean is calculated by dividing the aggregate commute time in minutes for each area by the number of workers 16 years old and older who did not work from home.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

Geography: City, Borough, Sub-borough Area

2016– Rank	17 CD#	Name	Value
Highe	st		
1	QN 14	Rockaways	52.3
2	QN 10	South Ozone Park/Howard Beach	49.3
3	QN 12	Jamaica	48.8
4	BK 13	Coney Island	48.6
5	BX 09	Soundview/Parkchester	48.4
Lowes	st		
51	MN 08	Upper East Side	32.5
52	MN 07	Upper West Side	32.2
53	MN 06	Stuyvesant Town/Turtle Bay	26.3
54	MN 04, 05	Chelsea/Clinton/Midtown	26.2
55	MN 01, 02	Greenwich Village/Financial District	25.6

#### **Median Household Income**

Household income is the total income of all members of a household aged 15 years or older. All figures have been adjusted to 2017 dollars. The U.S. Census Bureau advises against comparing income data between the decennial census and the American Community Survey (ACS) due to differences in question construction and sampling, so we urge caution when comparing this indicator over time, particularly at the neighborhood level. For more information on comparisons across years and across U.S. Census Bureau products, please refer to the Methods section of this report.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

Geography: National, City, Borough, Sub-borough Area

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	MN 01, 02	Greenwich Village/Financial District	\$139,900
2	MN 08	Upper East Side	\$119,260
3	MN 07	Upper West Side	\$113,450
4	MN 06	Stuyvesant Town/Turtle Bay	\$112,560
5	BK 06	Park Slope/Carroll Gardens	\$105,910
Lowes	it		
51	BX 04	Highbridge/South Concourse	\$32,120
52	BK 16	Brownsville/Ocean Hill	\$30,800
53	BX 01, 02	Mott Haven/Hunts Point	\$27,850
54	BX 05	University Heights/Fordham	\$27,140
55	BX 03, 06	Morrisania/Belmont	\$26,320

#### Median Rent, All

The monthly rent we report (with the exception of asking rents as outlined below) is gross rent, which includes two components: the amount agreed to or specified in the lease regardless of whether furnishings, utilities, or services are included; and estimated monthly electricity and heating fuel costs paid by the renter. Because the pre-compiled summary tables from the American Community Survey (ACS) do not report estimates for median gross rent when the median is above \$2,000, medians above that level come from the Public Use Microdata Sample of the ACS. Although the U.S. Census Bureau advises that rent estimates from the 2000 decennial census are not generally comparable to rent estimates from the ACS, the incompatibility stems from the ways in which rents for properties with large areas of undeveloped land were calculated; because New York City has very few such properties, we report 2000 estimates for median rent but advise some caution in comparing those figures to later years. For more information on comparisons across years, please refer to the Methods section of this report.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

Geography: City, Borough, Sub-borough Area

2016-	-17		
Rank	CD#	Name	Value
Highe	st		
1	MN 01, 02	Greenwich Village/Financial District	\$2,580
1	MN 06	Stuyvesant Town/Turtle Bay	\$2,580
3	MN 08	Upper East Side	\$2,290
4	MN 04, 05	Chelsea/Clinton/Midtown	\$2,280
5	MN 07	Upper West Side	\$2,200
Lowes	st		
51	BK 13	Coney Island	\$1,000
52	BK 16	Brownsville/Ocean Hill	\$990
53	BX 03, 06	Morrisania/Belmont	\$980
54	BX 01, 02	Mott Haven/Hunts Point	\$970
55	MN 11	East Harlem	\$890

#### Median Rent, Asking

This indicator measures the median rent that landlords advertise for housing units available for rent. Advertised rents may not reflect the final lease terms if these units become occupied. The median asking rent will appear to be higher than the median rent for all renters, which may reflect tenants with lower rents due to subsidies, rent regulation or simply favorable treatment from their landlords. We advise caution when comparing the median asking rent to any other median rent. Asking rents are presumably contract rents, which refer to rental costs that will be specified on a lease and may or may not include any utility costs. All other rents used in this report are gross rents, which is the contract rent plus any additional utility payments (see Median Rent). Unlike other rents reported elsewhere in this report, we do not adjust this indicator for inflation. We do not display median asking rents in community districts that had fewer than 30 listings. Care should also be taken because not all landlords elect to post listings on StreetEasy, so the sample is not necessarily representative of all units that were for rent.

Sources: StreetEasy, NYU Furman Center Geography: City, Borough, Community District

2016-	-17		
Rank	CD#	Name	Value
Highe	est		
1	MN 05	Midtown	\$4,000
2	MN 01	Financial District	\$3,950
3	MN 02	Greenwich Village/Soho	\$3,600
4	MN 04	Clinton/Chelsea	\$3,400
5	MN 06	Stuyvesant Town/Turtle Bay	\$3,300
Lowe	st		
55	BX 05	Fordham/University Heights	\$1,600
55	BX 09	Parkchester/Soundview	\$1,600
55	BX 11	Morris Park/Bronxdale	\$1,600
55	BX 12	Williamsbridge/Baychester	\$1,600
59	BX 07	Kingsbridge Heights/Bedford	\$1,500

#### **Median Sales Price per Unit**

#### (by property type)

We provide the median price per unit for whichever property type had a greater number of sales in 2017. For single-unit buildings, price per unit is the sales price of the home. For condominium buildings, the sales price is available for each apartment. For other multifamily buildings, the price per unit is calculated by dividing the sales price of the building by the number of units contained within the building. Prices are expressed in constant 2017 dollars. Changes in the median price should not be used to compare sales prices

#### 1 unit building (\$2017)

2016-	-17		
Rank	CD#	Name	Value
Highe	st		
1	MN 01	Financial District	\$17,654,440
2	MN 07	Upper West Side	\$13,101,400
3	MN 02	Greenwich Village/Soho	\$9,808,020
4	MN 08	Upper East Side	\$7,723,820
5	MN 06	Stuyvesant Town/Turtle Bay	\$4,904,010
Lowe	st		
52	BX 09	Parkchester/Soundview	\$377,610
53	BX 12	Williamsbridge/Baychester	\$367,800
54	BX 02	Hunts Point/Longwood	\$362,900
54	BX 04	Highbridge/Concourse	\$362,900
56	BX 06	Belmont/East Tremont	\$340,340

across years; the index of housing price appreciation is a better measure of housing price changes over time. Sales data for 2017 only include sales recorded as of January 31, 2018. This encompasses the vast majority of sales in 2017, but due to recording delays this number may be revised slightly when complete data are available.

Sources: New York City Department of Finance, Automated City Register Information System (ACRIS), NYU Furman Center

Geography: City, Borough, Community District

#### 5+ unit building (\$2017)

2016-17		Namo	Value	
калк	CD#	Nume	value	
Highe	est			
1	MN 01	Financial District	\$1,695,970	
2	MN 05	Midtown	\$1,112,700	
3	MN 02	Greenwich Village/Soho	\$735,600	
4	MN 04	Clinton/Chelsea	\$703,110	
5	MN 08	Upper East Side	\$647,330	
Lowe	st			
54	BX 12	Williamsbridge/Baychester	\$136,270	
55	SI 01	St. George/Stapleton	\$135,840	
56	QN 10	South Ozone Park/Howard Beach	\$131,710	
57	SI 03	Tottenville/Great Kills	\$122,600	
58	QN 14	Rockaway/Broad Channel	\$62,850	

#### 2-4 unit building (\$2017)

2016-	-17		
Rank	CD#	Name	Value
Highe	est		
1	MN 02	Greenwich Village/Soho	\$3,432,810
2	MN 08	Upper East Side	\$3,322,470
3	MN 07	Upper West Side	\$2,484,700
4	MN 06	Stuyvesant Town/Turtle Bay	\$1,859,440
5	MN 04	Clinton/Chelsea	\$1,347,380
Lowe	st		
52	BX 04	Highbridge/Concourse	\$210,870
52	BX 09	Parkchester/Soundview	\$210,870
54	BX 02	Hunts Point/Longwood	\$202,290
55	BX 06	Belmont/East Tremont	\$199,430
56	BX 03	Morrisania/Crotona	\$192,280

#### Condominium (\$2017)

2016- Rank	-17 CD#	Name	Value
Highe	est		
1	MN 02	Greenwich Village/Soho	\$2,550,090
2	MN 05	Midtown	\$1,824,290
3	MN 01	Financial District	\$1,667,360
4	MN 08	Upper East Side	\$1,544,760
5	MN 07	Upper West Side	\$1,373,120
Lowe	st		
54	QN 12	Jamaica/Hollis	\$220,680
55	BX 07	Kingsbridge Heights/Bedford	\$181,450
56	BX 11	Morris Park/Bronxdale	\$175,560
57	BX 02	Hunts Point/Longwood	\$174,520
58	BX 09	Parkchester/Soundview	\$132,410

#### **Notices of Foreclosure Rate**

#### (per 1,000 1-4 unit and condo properties)

This indicator measures the rate of mortgage foreclosure actions initiated per 1,000 one- to four unit properties and condominium units. For this indicator, we report the number of one- to four-family properties and condominium units that have received a mortgage-related *lis pendens* in the given calendar year per 1,000 one- to four-family properties and condominium units. Cooperative apartments are not included in this rate. If a property received multiple *lis pendens* within 90 days of each other, only the first *lis pendens* is counted here. For a more detailed description of our *lis pendens* methodology, please refer to the Methods section of this report.

Sources: Public Data Corporation, New York City Department of Finance Final Tax Roll File, NYU Furman Center

Geography: City, Borough, Community District

2016-	-17		
Rank	CD#	Name	Value
Highe	st		
1	BK 16	Brownsville	35.5
2	BK 05	East New York/Starrett City	32.9
3	QN 12	Jamaica/Hollis	30.2
4	BX 04	Highbridge/Concourse	28.4
5	BX 05	Fordham/University Heights	26.8
Lowe	st		
55	MN 02	Greenwich Village/Soho	1.9
55	MN 06	Stuyvesant Town/Turtle Bay	1.9
57	MN 05	Midtown	1.8
57	BK 06	Park Slope/Carroll Gardens	1.8
59	MN 07	Upper West Side	1.3

#### Population

The U.S. Census Bureau defines population as all people, both children and adults, living in a given geographic area.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center Geography: City, Borough, Sub-borough Area

## Population Aged 25+ With a Bachelor's Degree or Higher

This indicator measures the population aged 25 and older who have attained at least a bachelor's degree, including those with a master's, professional or doctoral degree, as a percentage of the entire population in a given geographic area.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

Geography: City, Borough, Sub-borough Are	ea
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2016- Rank	17 CD#	Name	Value
Highe	st		
1	MN 08	Upper East Side	80.9%
2	MN 01, 02	Greenwich Village/Financial District	80.1%
3	MN 06	Stuyvesant Town/Turtle Bay	80.0%
4	MN 04, 05	Chelsea/Clinton/Midtown	78.1%
5	MN 07	Upper West Side	76.9%
Lowes	st		
51	BX 04	Highbridge/South Concourse	14.0%
52	BX 07	Kingsbridge Heights/Mosholu	13.6%
53	BX 03, 06	Morrisania/Belmont	13.4%
54	BX 05	University Heights/Fordham	11.5%
55	BX 01, 02	Mott Haven/Hunts Point	9.9%

#### Population Aged 25+ Without a High School Degree

This indicator measures the population aged 25 and older who have not graduated from high school and have not received a GED, as a percentage of the entire population in a given geographic area.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

Geography: City, Borough, Sub-borough Area

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	BK 07	Sunset Park	42.8%
2	BX 01, 02	Mott Haven/Hunts Point	36.9%
3	BX 04	Highbridge/South Concourse	35.2%
4	BX 05	University Heights/Fordham	34.3%
5	BX 07	Kingsbridge Heights/Mosholu	33.3%
Lowes	st		
51	MN 04, 05	Chelsea/Clinton/Midtown	4.3%
52	MN 01, 02	Greenwich Village/Financial District	4.2%
53	MN 06	Stuyvesant Town/Turtle Bay	4.1%
54	MN 07	Upper West Side	3.9%
55	MN 08	Upper East Side	3.1%

#### **Population Aged 65 and Older**

This indicator measures residents who are aged 65 years and older as a percentage of the entire population in a given geographic area.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

2016– Rank	17 CD#	Name	Value
Highe	st		
1	BK 13	Coney Island	22.8%
2	MN 07	Upper West Side	21.9%
3	BX 10	Throgs Neck/Co-op City	21.0%
4	QN 06	Rego Park/Forest Hills	19.5%
5	QN 11	Bayside/Little Neck	19.3%
Lowes	st		
50	BX 03, 06	Morrisania/Belmont	9.4%
50	BK 06	Park Slope/Carroll Gardens	9.4%
52	BK 01	Williamsburg/Greenpoint	9.2%
53	BK 04	Bushwick	9.1%
54	BX 05	University Heights/Fordham	8.4%
55	BX 01, 02	Mott Haven/Hunts Point	7.5%

#### **Population Density**

#### (1,000 persons per square mile)

Population density is calculated by dividing a geographic area's population by its land area and is reported in thousands of people per square mile. The U.S. Census Bureau advises that American Community Survey (ACS) population estimates should be compared with caution across years. For more information on comparisons across years, please refer to the Methods section of this report.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

Geography: City, Borough, Sub-borough Area

2016-	2016-17				
Rank	CD#	Name	Value		
Highe	st				
1	MN 08	Upper East Side	110.2		
2	MN 10	Central Harlem	100.4		
3	MN 03	Lower East Side/Chinatown	91.3		
4	BX 05	University Heights/Fordham	89.5		
5	BX 07	Kingsbridge Heights/Mosholu	88.6		
Lowe	st				
51	BX 10	Throgs Neck/Co-op City	12.0		
52	QN 14	Rockaways	11.3		
53	QN 13	Queens Village	10.9		
54	SI 03	South Shore	7.6		
55	SI 02	Mid-Island	6.1		

#### **Poverty Rate**

This indicator measures the number of people below the poverty threshold divided by the number of people for whom poverty status was determined. Poverty status is determined by the U.S. Census Bureau based on household size, composition, the number of children under 18 years of age, and individual or family income. The U.S. Census Bureau advises that American Community Survey (ACS) poverty data should be compared with caution across years. For more information on comparisons across years, please refer to the Methods section of this report.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

17		
CD#	Name	Value
st		
BX 05	University Heights/Fordham	41.1%
BX 01, 02	Mott Haven/Hunts Point	36.9%
BX 03, 06	Morrisania/Belmont	36.3%
BX 04	Highbridge/South Concourse	34.9%
BK 16	Brownsville/Ocean Hill	33.2%
it		
MN 01, 02	Greenwich Village/Financial District	8.0%
QN 11	Bayside/Little Neck	7.6%
MN 06	Stuyvesant Town/Turtle Bay	7.1%
MN 08	Upper East Side	6.5%
SI 03	South Shore	5.9%
	17 CD# st BX 05 BX 01, 02 BX 03, 06 BX 04 BK 16 BK 16 VN 01, 02 QN 11 MN 06 MN 08 SI 03	17 CD#NamestBX 05University Heights/FordhamBX 01, 02Mott Haven/Hunts PointBX 03, 06Morrisania/BelmontBX 04Highbridge/South ConcourseBK 16Brownsville/Ocean HillstImage: South ConcourseMN 01, 02Greenwich Village/Financial DistrictQN 11Bayside/Little NeckMN 06Stuyvesant Town/Turtle BayMN 08Upper East SideSI 03South Shore

#### **Racial Diversity Index**

The Racial Diversity Index (RDI) measures the probability that two randomly chosen people in a given geographic area will be of a different race. The NYU Furman Center uses the categories of Asian (non-Hispanic), black (non-Hispanic), Hispanic (of any race), and white (non-Hispanic) to calculate the index. People identifying as some other race or reporting more than one race are excluded from this calculation. Nonetheless, the groups we focus on accounted for 96.9 percent of New York City's population in 2016. The RDI is calculated using the following formula:

 $RDI = 1 - (P^{2}_{Asian} + P^{2}_{black} + P^{2}_{Hispanic} + P^{2}_{white})$ 

A higher number indicates a more racially diverse population. For instance, if an area is inhabited by a single racial/ ethnic group, its RDI would be zero. If the population of a neighborhood is evenly distributed among the four groups (25% of residents are Asian, 25% black, 25% Hispanic, and 25% white), its RDI would be 0.75. In practice, in neighborhoods with a large share of residents who do not fall into any of the four groups, the RDI may be slightly greater than 0.75.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

Geography: City, Borough, Sub-borough Area

2016-17				
Rank	CD#	Name	Value	
Highe	st			
1	QN 10	South Ozone Park/Howard Beach	0.81	
2	QN 08	Hillcrest/Fresh Meadows	0.75	
3	MN 09	Morningside Heights/Hamilton Heights	0.73	
4	MN 03	Lower East Side/Chinatown	0.72	
4	BK 14	Flatbush	0.72	
4	SI 01	North Shore	0.72	
Lowes	st			
51	BX 05	University Heights/Fordham	0.43	
51	BX 07	Kingsbridge Heights/Mosholu	0.43	
53	MN 01, 02	Greenwich Village/Financial District	0.40	
54	SI 03	South Shore	0.27	
55	BK 17	East Flatbush	0.25	

#### Racial/Ethnic Share

#### (Asian, Black, Hispanic, White)

This indicator measures the percentage of the total population made up of each of the following racial/ethnic groups: Asian (non-Hispanic), black (non-Hispanic), Hispanic (of any race), and white (non-Hispanic). The percentages of the four groups may not add up to 100 because people of other races or two or more races are not displayed.

Sources: U.S. Census (2000), American Community Survey (2016), NYU Furman Center

#### Rental Units Affordable at 80% AMI

#### (% of recently available units)

Recently available units are defined as affordable to a household if its gross rent (rent plus electricity and heating fuel costs; see median rent definition) is less than 30 percent of the household's gross monthly income. In order to represent the experiences of households with different incomes, we report shares of rental units affordable at 30 percent (the "extremely low-income" limit), 50 percent (the "very low-income" limit), 80 percent (the "lowincome" limit), and 120 percent (the "moderate-income" limit) of the area median income (AMI) as defined by the U.S. Department of Housing and Urban Development's Section 8 and HOME program guidelines. For units without bedrooms (studios), we determine affordability based on one-person income limits; one-bedroom units use twoperson income limits; two-bedroom units use three-person income limits; and units with three or more bedrooms use four-person income limits.

Sources: U.S. Census (2000), American Community Survey (2016), U.S. Department of Housing and Urban Development, NYU Furman Center

Geography: City, Borough, Sub-borough Area

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	BX 01, 02	Mott Haven/Hunts Point	91.8%
2	BX 05	University Heights/Fordham	89.9%
3	BX 04	Highbridge/South Concourse	88.8%
4	BX 03, 06	Morrisania/Belmont	88.1%
5	BK 16	Brownsville/Ocean Hill	86.5%
Lowes	st		
44	MN 04, 05	Chelsea/Clinton/Midtown	17.7%
45	MN 06	Stuyvesant Town/Turtle Bay	14.5%
46	MN 01, 02	Greenwich Village/Financial District	13.4%
47	MN 08	Upper East Side	12.5%
48	BK 06	Park Slope/Carroll Gardens	11.3%

#### **Rental Vacancy Rate**

This indicator measures habitable, for-rent rental units that are vacant as a percentage of renter-occupied units plus the vacant, habitable, for-rent units. This calculation excludes housing units in group quarters, such as hospitals, jails, mental institutions, and college dormitories, as well as units that are rented but not occupied and units that are in such poor condition that they are not habitable. We report data from five-year American Community Survey (ACS) estimates at the sub-borough level.

Sources: U.S. Census (2000), American Community Survey (2006-2010, 2012-2016), NYU Furman Center

2016 Bank	-17 CD#	Name	Value
High	est	Nume	Value
1	SI 01	North Shore	7.9%
2	MN 04, 05	Chelsea/Clinton/Midtown	6.6%
3	MN 06	Stuyvesant Town/Turtle Bay	6.0%
4	MN 08	Upper East Side	5.7%
4	BK 05	East New York/Starrett City	5.7%
Lowe	st		
51	BK 06	Park Slope/Carroll Gardens	1.9%
51	QN 08	Hillcrest/Fresh Meadows	1.9%
53	MN 12	Washington Heights/Inwood	1.7%
54	BX 10	Throgs Neck/Co-op City	1.5%
54	QN 04	Elmhurst/Corona	1.5%

## Residential Units within 1/4 mile of a Park

This indicator measures the percentage of residential units in a given geographic area that are within a quarter mile of a park entrance, excluding parks that are smaller than a quarter of an acre or are categorized as a "mall," "parkway," "lot," "strip," or "undeveloped." We include state parks within city limits but do not include Greenstreets. For a more detailed description of how this indicator is calculated, please refer to the Methods chapter of this report.

Sources: New York City Department of Parks and Recreation; New York State Office of Parks, Recreation, and Historic Preservation; New York City Department of City Planning; NYU Furman Center

Geography: City, Borough, Community District

2016-	2016-17				
Rank	CD#	Name	Value		
Highe	st				
1	MN 09	Morningside Heights/Hamilton	100.0%		
1	MN 11	East Harlem	100.0%		
3	MN 03	Lower East Side/Chinatown	99.8%		
3	BX 01	Mott Haven/Melrose	99.8%		
3	BX 03	Morrisania/Crotona	99.8%		
Lowe	st				
55	QN 10	South Ozone Park/Howard Beach	39.8%		
56	BK 12	Borough Park	39.6%		
57	QN 13	Queens Village	38.4%		
58	BK 17	East Flatbush	38.3%		
59	BK 14	Flatbush/Midwood	29.7%		
			,		

## Residential Units within 1/2 mile of a Subway Station

This indicator measures the percentage of residential units in a given geographic area that are within a half-mile walk of a station entrance for the New York City Subway (including the 34 St-Hudson Yards Station, which opened in September 2015, and the Second Avenue subway line, which opened in January 2017), Long Island Rail Road, PATH, Amtrak, Metro-North Railroad, or Staten Island Railway. For a more detailed description of how this indicator was calculated, please refer to the Methods chapter of this report.

Sources: New York City Department of Transportation, New York City Department of City Planning, NYU Furman Center Geography: City, Borough, Community District

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	MN 01	Financial District	100.0%
1	MN 02	Greenwich Village/Soho	100.0%
1	MN 05	Midtown	100.0%
1	MN 09	Morningside Heights/Hamilton	100.0%
1	MN 10	Central Harlem	100.0%
1	MN 12	Washington Heights/Inwood	100.0%
1	BX 01	Mott Haven/Melrose	100.0%
Lowes	st		
55	SI 02	South Beach/Willowbrook	24.3%
56	QN 11	Bayside/Little Neck	20.5%
57	BK 18	Flatlands/Canarsie	12.7%
57	SI 01	St. George/Stapleton	12.7%
59	QN 13	Queens Village	9.1%

#### Sales Volume

#### (All Property Types)

This indicator measures the number of arm's-length transactions of residential properties. At the city level, sales volume is disaggregated by property type, including single- and multifamily buildings, condominiums, and cooperatives. All housing types, except cooperative units, are summed together; sales volumes for cooperative units are not available prior to 2004. Sales data for 2017 only include sales recorded as of January 31, 2018. This should include the vast majority of sales in 2017, but due to recording delays this number may be revised slightly when complete data are available. To qualify as arm's length, a transaction must have a non-trivial price and the sale must not be marked as "insignificant" by the Department of Finance. For additional information about arm's length sales, please refer to the Methods section of this report.

Sources: New York City Department of Finance, Automated City Register Information System (ACRIS), NYU Furman Center

Geography: City, Borough, Community District

2016-			
Rank	CD#	Name	Value
Highe	st		
1	SI 03	Tottenville/Great Kills	1,895
2	SI 02	South Beach/Willowbrook	1,543
3	SI 01	St. George/Stapleton	1,490
4	QN 12	Jamaica/Hollis	1,345
5	QN 07	Flushing/Whitestone	1,247
Lowes	st		
54	BX 03	Morrisania/Crotona	99
54	BX 04	Highbridge/Concourse	99
56	BX 05	Fordham/University Heights	98
57	MN 09	Morningside Heights/Hamilton	83
58	BX 01	Mott Haven/Melrose	81
59	BX 02	Hunts Point/Longwood	79

#### **Serious Crime Rate**

#### (per 1,000 residents)

The New York City Police Department (NYPD) collects data on criminal activity, which the department reports consistent with classifications set primarily by the New York State Penal Law. A crime is considered serious if it is classified as a major felony as defined by the NYPD. This category contains most types of assault, burglary, larceny, motor vehicle theft, murder (including non-negligent manslaughter), rape, and robbery. Serious property crimes include most types of burglary, larceny, and motor vehicle theft. Serious violent crime includes most types of assault, murder (including non-negligent manslaughter), rape, and robbery. Rates are calculated as the number of crimes committed in a given geographic area per 1,000 residents (based on decennial population counts) and it is possible that perpetrators or victims of crimes may reside in other neighborhoods or outside of New York City. We geocode publically available incident-level crime data from the NYPD. Because precise geographic information is not available for rapes, we exclude these crimes from the rate calculation at the community district level.

Sources: New York City Police Department via NYC Open Data, U.S. Census, NYU Furman Center

Geography: City, Borough, Community District

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	MN 05	Midtown	84.5
2	MN 04	Clinton/Chelsea	25.4
3	BX 01	Mott Haven/Melrose	25.2
4	MN 02	Greenwich Village/Soho	23.8
5	BK 02	Fort Greene/Brooklyn Heights	19.0
Lowes	st		
55	BK 11	Bensonhurst	6.0
56	QN 06	Rego Park/Forest Hills	5.2
57	SI 02	South Beach/Willowbrook	4.9
58	BK 12	Borough Park	4.3
59	SI 03	Tottenville/Great Kills	2.8

#### **Serious Housing Code Violations**

#### (per 1,000 privately owned rental units)

The New York City Department of Housing Preservation and Development (HPD) investigates housing code complaints from tenants in privately owned units and issues code violations if housing inspections reveal problems. Serious housing code violations are class C ("immediately hazardous"). These numbers include all violations that HPD opened in a given time period, regardless of their current status. The New York City Housing Authority has a parallel process for recording and inspecting housing violations within public housing. Their violations are not included in this indicator, so we exclude public housing units from the denominator. Data for 2012 and later, we use NYC Open Data. Prior to 2012, we use HPD data. The base data for this file is all violations open as of October 1, 2012. All violations issued since that date have been added to the file and the current status of the violation is provided. The file is updated daily with status changes and newly issued violations. An open violation is a violation which is still active on the Department records

Sources: New York City Department of Housing Preservation and Development via NYC Open Data, New York City Department of Finance Final Tax Roll File, New York City Housing Authority, NYU Furman Center Geography: City, Borough, Community District

2016-17			
Rank	CD#	Name	Value
High	est		
1	BX 04	Highbridge/Concourse	122.7
2	BK 16	Brownsville	118.7
3	MN 12	Washington Heights/Inwood	115.8
4	BX 06	Belmont/East Tremont	115.2
5	BK 05	East New York/Starrett City	113.1
Low	est		
55	MN 05	Midtown	8.4
55	SI 02	South Beach/Willowbrook	8.4
57	QN 11	Bayside/Little Neck	6.6
58	SI 03	Tottenville/Great Kills	4.9
59	MN 01	Financial District	3.5

#### Severe Crowding Rate

#### (% of renter households)

A severely crowded household is defined as one in which there are more than 1.5 household members for each room (excluding bathrooms) in the unit. We present the indicator as a share of all renter households. For the 2009 American Community Survey (ACS), the Census Bureau substantially changed its survey question and processing pertaining to the number of rooms in a housing unit. These changes prevent comparison with earlier years. Due to small sample sizes, we report the 2006-2010 and 2012-2016 five-year estimates from the ACS for sub-borough areas.

Sources: American Community Survey, NYU Furman Center Geography: City, Borough, Sub-borough Area

2016	17	Marina	Value
капк	CD#	Name	vaiue
Highe	st		
1	QN 04	Elmhurst/Corona	10.9%
2	QN 03	Jackson Heights	10.5%
3	BK 12	Borough Park	9.2%
4	BX 04	Highbridge/South Concourse	8.9%
5	BK 07	Sunset Park	8.6%
Lowes	st		
49	MN 07	Upper West Side	2.1%
49	MN 10	Central Harlem	2.1%
49	QN 05	Middle Village/Ridgewood	2.1%
52	MN 08	Upper East Side	1.9%
53	QN 13	Queens Village	1.7%
54	BX 10	Throgs Neck/Co-op City	1.6%
55	QN 11	Bayside/Little Neck	1.5%
49 49 52 53 54 55	MN 07 MN 10 QN 05 MN 08 QN 13 BX 10 QN 11	Upper West Side Central Harlem Middle Village/Ridgewood Upper East Side Queens Village Throgs Neck/Co-op City Bayside/Little Neck	22 22 11 11

#### **Severely Rent Burdened Households**

### (% of renter households, % of low-income renter households)

This indicator measures the share of renter households whose gross rent (rent plus electricity and heating fuel costs; see median rent definition) equaled at least 50 percent of their income. These households are classified as severely rent burdened. Low-income households have incomes at or below 80 percent of the area median income as defined by the U.S. Department of Housing and Urban Development's Section 8 and HOME program guidelines. Comparisons between the overall rate of severe rent burden and the rate of severe rent burden among low-income renters should be made with caution, as the data sources differ slightly. The overall rate comes from pre-compiled summary tables of the 2000 decennial census and the American Community Survey (ACS) 5-year estimates, while the rate among moderateincome renters is calculated from the Public Use Microdata Sample. Subsidized renters may be erroneously classified as rent burdened by the ACS under certain circumstances.

Sources: U.S. Census (2000), American Community Survey (2006-2010, 2012-2016), IPUMS-USA, University of Minnesota, U.S. Department of Housing and Urban Development Section 8/ HOME Program Income Guidelines, NYU Furman Center

Geography: City, Borough, Sub-borough Area

#### All renter households

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	BK 12	Borough Park	44.8%
2	BX 05	University Heights/Fordham	42.7%
3	BX 04	Highbridge/South Concourse	40.0%
4	QN 07	Flushing/Whitestone	38.4%
5	BX 07	Kingsbridge Heights/Mosholu	37.5%
Lowes	st		
51	MN 07	Upper West Side	19.9%
52	BK 02	Brooklyn Heights/Fort Greene	19.8%
53	MN 08	Upper East Side	19.5%
54	MN 01, 02	Greenwich Village/Financial District	19.4%
55	BK 06	Park Slope/Carroll Gardens	16.7%

#### Low-income renter households

2016-	17		
Rank	CD#	Name	Value
Highe	st		
1	MN 06	Stuyvesant Town/Turtle Bay	64.1%
2	MN 01, 02	Greenwich Village/Financial District	63.9%
3	BK 12	Borough Park	56.2%
4	MN 08	Upper East Side	56.1%
5	QN 06	Rego Park/Forest Hills	56.1%
Lowes	st		
40	BK 13	Coney Island	37.6%
41	MN 03	Lower East Side/Chinatown	35.8%
42	BX 01, 02	Mott Haven/Hunts Point	35.5%
43	MN 10	Central Harlem	34.6%
44	MN 11	East Harlem	29.2%

#### Students Performing at Grade Level, Fourth Grade

#### (English language arts, math)

These indicators report the percentage of fourth-grade students performing at or above grade level (termed "proficient"). The New York City Department of Education's (DOE) Division of Performance and Accountability develops and administers city and state tests and compiles data on students' performance on those tests. The DOE provides these data at the school level. For each community district, we aggregate the proficiency rates from each school in that community district, even if some students in that school live outside the community district. In 2013, DOE implemented new exams based on New York State's Common Core standards. As a result, proficiency rates for those exams are not comparable to rates from exams given before 2013, and should not be compared to rates in previous years' State of New York City's Housing and Neighborhoods reports. For this indicator, school years are labeled according to the calendar year in which the school year ends. For example, 2017 corresponds to the 2016-2017 school year.

Sources: New York City Department of Education, NYU Furman Center Geography: City, Borough, Community District

#### English language arts

2016-			
Rank	CD#	Name	Value
Highe	st		
1	MN 05	Midtown	82.9%
2	MN 08	Upper East Side	80.2%
3	MN 02	Greenwich Village/Soho	79.0%
4	MN 01	Financial District	78.7%
5	MN 06	Stuyvesant Town/Turtle Bay	77.8%
Lowe	st		
55	MN 10	Central Harlem	22.5%
56	BX 06	Belmont/East Tremont	22.2%
57	BX 02	Hunts Point/Longwood	20.1%
58	BX 03	Morrisania/Crotona	20.1%
59	BK 16	Brownsville	19.3%

#### Math

2016-	-17		
Rank	CD#	Name	Value
Highe	est		
1	MN 02	Greenwich Village/Soho	83.2%
2	MN 01	Financial District	81.5%
3	MN 08	Upper East Side	78.0%
4	QN 11	Bayside/Little Neck	77.8%
5	MN 07	Upper West Side	73.5%
Lowe	st		
55	BX 02	Hunts Point/Longwood	19.0%
56	BX 03	Morrisania/Crotona	18.2%
57	MN 10	Central Harlem	14.2%
58	BK 16	Brownsville	13.4%
59	BX 06	Belmont/East Tremont	12.1%

#### **Unemployment Rate**

This indicator measures the number of people aged 16 years and older in the civilian labor force who are unemployed, divided by the total number of people aged 16 years and older in the civilian labor force. People are considered to be unemployed if they meet the following criteria: they have not worked during the week of the survey; they have been looking for a job during the previous four weeks; and they were available to begin work. The U.S. Census Bureau advises using caution when comparing the 2000 census unemployment rate to the American Community Survey figures because of differences in question construction and sampling.

Sources: U.S. Census (2000), American Community Survey (2006, 2010, 2016), NYU Furman Center

Geography: City, Borough, Sub-borough Area

Rank	CD#	Name	Value
Highe	st		
1	BK 16	Brownsville/Ocean Hill	14.0%
2	BX 05	University Heights/Fordham	12.7%
3	BX 03, 06	Morrisania/Belmont	11.6%
3	BX 04	Highbridge/South Concourse	11.6%
5	BX 07	Kingsbridge Heights/Mosholu	10.7%
Lowe	st		
51	QN 02	Sunnyside/Woodside	3.5%
52	MN 08	Upper East Side	3.4%
53	MN 04, 05	Chelsea/Clinton/Midtown	3.3%
53	MN 06	Stuyvesant Town/Turtle Bay	3.3%
55	QN 11	Bayside/Little Neck	2.7%

#### Units Authorized by New Residential Building Permits

The number of units authorized by new residential building permits is derived from the building permit and job filing reports of the New York City Department of Buildings. Permit renewals are not included. Not all building permits will result in actual construction, but the number of units authorized by new permits is the best available indicator of how many units are under construction. Comparisons between years prior to 2007 and more recent years should be made with caution due to data improvements that facilitate more accurate estimates of the number of new units attached to each building permit. Specifically, the figures for 2000 may be an underestimate. See the Methods section for more information about the compilation of this indicator.

Sources: New York City Department of Buildings via NYC Open Data, NYU Furman Center

Geography: City, Borough, Community District

2016-	-17		
Rank	CD#	Name	Value
Highe	est		
1	BK 02	Fort Greene/Brooklyn Heights	1,341
2	BX 01	Mott Haven/Melrose	1,236
3	QN 12	Jamaica/Hollis	1,153
4	BX 03	Morrisania/Crotona	1,082
5	MN 07	Upper West Side	1,069
Lowe	st		
55	BX 10	Throgs Neck/Co-op City	37
56	QN 13	Queens Village	34
57	QN 06	Rego Park/Forest Hills	10
58	BK 18	Flatlands/Canarsie	8
59	BK 10	Bay Ridge/Dyker Heights	2
-			

#### Units Issued New Certificates of Occupancy

This indicator measures the number of residential units in buildings issued new certificates of occupancy (often called "C of Os") issued by the New York City Department of Buildings (DOB) each year. The DOB requires a certificate before any newly constructed housing unit can be occupied. Rehabilitated housing units generally do not require certification unless the rehabilitation is significant, meaning that the floor plan of the unit is changed. To avoid double counting, if a building has received multiple certificates since 2005 (for example, a temporary and a final certificate) only the first is counted.

Sources: New York City Department of City Planning, New York City Department of Building, NYU Furman Center

Geography: City, Borough, Community District

2016-	17					
Rank	CD#	Name	Value			
Highe	Highest					
1	QN 02	Woodside/Sunnyside	2,810			
2	BK 02	Fort Greene/Brooklyn Heights	2,782			
3	BK 01	Greenpoint/Williamsburg	2,179			
4	MN 04	Clinton/Chelsea	1,950			
5	QN 01	Astoria	1,015			
Lowe	st					
55	QN 13	Queens Village	34			
56	BK 10	Bay Ridge/Dyker Heights	27			
57	QN 10	South Ozone Park/Howard Beach	15			
58	BK 18	Flatlands/Canarsie	6			
59	QN 09	Kew Gardens/Woodhaven	4			

## Methods

#### **Geographic Definitions**

This report presents information for the entire City of New York, for each of the five boroughs, and for the neighborhoods within each borough. The city defines neighborhoods by dividing the boroughs into 59 community districts (CDs); the U.S. Census Bureau, however, divides the boroughs into 55 sub-borough areas (SBAs). SBAs are geographic units created by the U.S. Census Bureau for the administration of the New York City Housing and Vacancy Survey and were designed to have similar boundaries to those of community districts. This report provides data for community districts where available but otherwise employs data at the SBA level. The term *neighborhood* is used in this report to refer to both community districts and SBAs even though they are larger than what many consider to be neighborhoods. We have included reference maps for community districts and sub-borough areas following this chapter.

#### Borough

New York City consists of five boroughs: the Bronx, Brooklyn, Manhattan, Queens, and Staten Island. Each borough is represented by a borough president, an elected official who advises the mayor on issues related to his or her borough and, along with the borough board, makes recommendations concerning land use and the allocation of public services. Each borough is also a county. Counties are legal entities with boundaries defined by state law.

#### **Community District (CD)**

Community districts are political units unique to New York City. Each of the 59 community districts has a community board. Half of the community board's members are appointed by the borough president and half are nominated by the City Council members who represent the district. The community boards review applications for zoning changes and other land use proposals and make recommendations for budget priorities. Each community board is assigned a number within its borough. The borough and this number uniquely identify each of the 59 community districts. Therefore, we designate each community district with a twoletter borough code and a two-digit community board code. For example, BK 02 is the community district represented by Community Board 2 in Brooklyn.

#### Sub-Borough Area (SBA)

Sub-borough areas are geographic units created by the U.S. Census Bureau for the administration of the New York City Housing and Vacancy Survey and were designed to have similar boundaries to those of community districts. These same areas are also defined by the U.S. Census Bureau as Public Use Microdata Areas (PUMAs), so we are able to use the two terms interchangeably. Sub-borough areas are referred to using a three-digit number, where the first digit signifies the borough (we number boroughs in alphabetical order, with the Bronx being 1 and Staten Island being 5). There are 59 community districts in New York City but only 55 sub-borough areas. The U.S. Census Bureau combined four pairs of community districts in creating the sub-borough areas to improve sampling and protect the confidentiality of respondents. These pairs are Mott Haven/Melrose (BX 01) and Hunts Point/Longwood (BX 02) in the Bronx (combined into SBA 101), Morrisania/Crotona (BX 03) and Belmont/East Tremont (BX 06) in the Bronx (combined into SBA 102), the Financial District (MN 01) and Greenwich Village/Soho (MN 02) in Manhattan (combined into SBA 301), and Clinton/Chelsea (MN 04) and Midtown (MN 05) in Manhattan (combined into SBA 303). Because sub-borough areas are constructed from Census tracts, their boundaries do not coincide precisely with community district boundaries, which generally follow major streets. However, they are similar enough that we use them interchangeably throughout this report. The U.S. Census Bureau periodically updates its geographic boundaries for each decennial census, and so the shapes of sub-borough areas changed slightly between the 2011 and 2012 releases of the American Community Survey. Although we treat these different vintages of sub-borough areas as being consistent over time, we advise some caution when comparing estimates from 2016 to earlier years.

#### Rankings

This report includes rankings of the five boroughs and all 59 community districts or 55 sub-borough areas for each indicator. The neighborhood ranked first has the highest number or percentage for the measure, even if lower values of measure are considered "better" (such as with crime rates). When possible, we rank all 59 community districts, though we present ranks for the 55 sub-borough areas for those indicators-including all indicators drawn from U.S. Census Bureau and Home Mortgage Disclosure Act sources—that can be aggregated to the sub-borough area level. In addition, a few indicators are not available for all neighborhoods, so we provide rankings for a subset of neighborhoods. For instance, we report median asking rent only for community districts with at least 30 rental listings in a given year. Therefore, we present rankings only for the subset of community districts where median asking rent is available.

#### **Map Boundaries**

Maps displaying New York City-specific administrative and political boundaries use base map data provided by the New York City Department of City Planning's Bytes of the Big Apple program. These boundaries include boroughs, community districts, and individual properties. Maps displaying data in geographic areas defined by the U.S. Census Bureau—such as sub-borough areas —use base map data from Census TIGER products.

#### **United States Census Sources**

A number of the indicators presented in the *State of New York City's Housing and Neighborhoods* are derived from data collected by the U.S. Census Bureau. These sources are described below along with a discussion of issues of comparability across sources.

#### **Decennial Census (Census)**

From 1970 through 2000, the decennial census consisted of two parts: the "short form" that collected information from every person and about every housing unit in the country, and the "long form" of additional questions asked of a sample of people and households. The short form collected information on age, race, Hispanic or Latino origin, household relationship, sex, tenure, and vacancy status. The long form provided more in-depth information about personal and housing characteristics such as income, employment status, and housing costs. In this edition of the State of New York City's Housing and Neighborhoods, we use data from the decennial census short and long forms to derive demographic, economic, and housing measures for 2000. To create most of these indicators, we use summary census data reported at the city, borough, and sub-borough area levels. In 2010, the decennial census only included the short form since most of the data that had previously been included in the long form were now reported in the American Community Survey (see below). While much of the decennial census short-form data is also found in the American Community Survey (such as the count of households), the two sources often report differing numbers for statistical and methodological reasons. Unless otherwise noted, we use data from the American Community Survey for 2005 through 2016.

#### American Community Survey (ACS)

The ACS is an annual survey that collects data similar to those formerly collected by the census long form described above. As with the long form, the ACS covers only a sample of individuals and housing units. However, the ACS uses a smaller sample: the long form covered one out of every six housing units while the ACS only covers one in 40 housing units each year. The U.S. Census Bureau began developing the ACS in 1996, but reliable annual estimates for geographic areas with a population of 65,000 or more only became available in 2005. In December 2010, the U.S. Census Bureau began releasing five-year rolling estimates for geographic areas as small as block groups. Multiyear estimates are referred to by the whole range of years covered (for example, 2012-2016) and should be interpreted as a measure of the conditions during the whole range; due to space constraints, however, multivear estimates presented in tables in Part 2 are, where noted, labeled using only the final year of the range (that is, an indicator from the 2012-2016 ACS is listed under the heading "2016"). Most of the indicators from the ACS in this edition are derived from pre-compiled summary tables reported by the U.S. Census Bureau for the city as a whole, individual boroughs, and PUMAs, which, as discussed above, are identical to New York City's sub-borough areas (and which are often referred to in this report as "neighborhoods").

For most city- and borough-level indicators, we report figures derived from one-year estimates from the ACS. However, for some indicators, due to the small sample size, oneyear estimates can be prone to volatility and sampling error, which can make it difficult to reliably discern whether an indicator's change from one year to the next represents a real change or a statistical anomaly. In order to reduce this uncertainty and draw valid conclusions from differences over both time and space, for select indicators we use fiveyear ACS estimates. Please see the Sampling section below for recommendations about making comparisons over time and across geographic levels.

#### **Public Use Microdata Samples (PUMS)**

While most decennial census- and ACS-derived indicators use pre-tabulated summary data that are reported at a given geography, we calculate some indicators by aggregating person- and household-level data to the desired geographic level. The U.S. Census Bureau makes individual-level data available in Public Use Microdata Samples (PUMS), which are anonymized extracts from the confidential microdata that the U.S. Census Bureau uses in its own calculations for the decennial census and the ACS. We use PUMS data to calculate the household income distribution, income diversity ratio, recently available units affordable to households at different income levels, moderate and severe rent burden rates for households at different income levels, and several indicators by racial and ethnic group in the New York City section of Part 2. The only geographic areas that ACS PUMS data identify for a household are its state and PUMA. New York City's PUMAs are completely coterminous with its city boundaries. In this report, we use data from the IPUMS-USA database, provided by the Minnesota Population Center and the University of Minnesota.

#### Comparisons Between U.S. Census Bureau Products

The U.S. Census Bureau makes continual adjustments to the decennial Census and the ACS to improve the coverage of the surveys and accuracy of the results. These adjustments often make cross-year comparisons difficult. Below is a discussion of the key areas where changes in sampling, question construction, or other methods might affect the comparability of indicators that we report in the *State of*  *New York City's Housing and Neighborhoods* over time. More information about comparability between U.S. Census Bureau data sources is available at: https://www.census.gov/programs-surveys/acs/guidance/comparing-acs-data.html.

#### Sampling

Because the ACS is a sample survey, not a census, all indicators derived from it are estimates, not exact<sup>1</sup> counts. The ACS sample includes approximately three million housing units nationwide, including about 66,000 in New York City. Readers should treat all estimates with some skepticism and be aware that the true value may differ from the reported estimate. This is especially important when comparing small year-to-year changes in sample-derived estimates or with estimates that are derived from a reduced sample. For example, the median rent does not use the entire sample but just the subset of respondents who are renters.

#### **Comparisons Between Different Sampling Intervals**

In order to report more reliable estimates of ACS-derived indicators for smaller geographies (such as sub-borough areas) or small populations (such as people aged 16 to 19 for the disconnected youth indicator), we use multiyear ACS estimates. The U.S. Census Bureau recommends using one-year estimates for areas with populations of at least 65,000; all sub-borough areas have populations that are above 100,000, but certain subsamples (for example, recent movers or low-income renters) are considerably smaller. Fiveyear estimates reflect data from five full years of surveys, allowing for much more robust and accurate estimates at the expense of being less current. Multiyear estimates should be interpreted as describing the conditions that existed during the full sample range, and therefore should not be compared directly to one-year estimates for any of the individual years in the range. For example, the rental vacancy rate in SBA 201 (Greenpoint/Williamsburg in Brooklyn) was 2.0 percent according to the 2012-2016 ACS. In Brooklyn as a whole, the rental vacancy rate was 3.1 percent according to the 2016 ACS. Because the estimate for SBA 201 is for the entire period from 2012 through 2016, it is not strictly comparable to the borough-wide number, which comes from 2016 alone; if the vacancy rate in Greenpoint/Williamsburg and in Brooklyn

<sup>1</sup> Censuses have their own methodological problems, of course, and may systematically under- or over-count certain populations.

as a whole declined substantially between 2012 and 2016, the estimate for SBA 201 would include the higher vacancy rate in 2012 as well as the lower vacancy rate in 2016, while the borough-wide estimate would only use data from after the decrease. (And, if the vacancy rate increased in the interim, vice versa.) It is appropriate, however, to compare multiyear estimates to estimates for a single year that falls outside the multiyear range. For example, one could compare the 2012-2016 estimate to the 2006 estimate, since 2006 is not within the range of 2012-2016.

Multiyear estimates can be compared to other multiyear estimates of the same duration as long as the ranges do not overlap. So, the 2012-2016 estimates for one sub-borough area can be compared to the 2007–2011 estimates for that sub-borough area and to the 2012-2016 estimates for other sub-borough areas. To compare a neighborhood's multiyear ACS estimate to the rest of the city, it is more effective to use its ranking than to compare its multiyear neighborhood estimate to the city's single-year estimate.

#### Income and Rent

Ouestion construction and data collection for income information differs between the decennial census and the ACS. The 2000 census asked for the respondent's 1999 income; thus incomes reported in 2000 are all for one fixed period of time (calendar year 1999). In contrast, the ACS asks for the respondent's income over the "past 12 months." As the U.S. Census Bureau collects ACS responses on an ongoing basis throughout the year, these estimates are not directly comparable; for example, a 2016 ACS respondent who was interviewed in January of 2016 would report income that was mostly earned in 2015, while a respondent who was interviewed in December of 2016 would report income that was mostly earned in 2016. The U.S. Census Bureau notes that a comparison study of the 2000 census and the 2000 ACS found that incomes reported in the census were about four percent higher than the incomes reported in the ACS. Because of the data collection methods mentioned above, adjacent years of ACS data may have reference months in common; thus comparisons of income data between adjacent ACS years (for example, 2015 and 2016) should not be interpreted as precise comparisons of economic conditions in those years.

The indicators that draw on the ACS income data include the income diversity ratio (from PUMS data), median household income, poverty rate, and poverty rate by age. As a result, year-to-year changes in these indicators should be interpreted with caution. Except where otherwise noted, we adjust all dollar figures for inflation (to constant 2017 dollars) from the nominal dollar values reported by the U.S. Census Bureau (see below for more on how we adjust for inflation). However, such nominal dollar values are generated by the U.S. Census using different methods depending on the source of the data. For ACS estimates that are included in the pre-tabulated summary data, the U.S. Census Bureau reports dollar amounts that have been inflated to the annual average for the survey year (for example, calendar year 2016 for the 2016 ACS) based on the monthly Consumer Price Index (CPI). Thus, respondents' incomes (and rents) are adjusted to account for the fact that some are interviewed early in the year and others are interviewed later in the year. Such an adjustment, however, may not fully account for changes in the state of the economy over the course of the year. For example, if unemployment were higher in 2015 than in 2016, respondents interviewed in January of 2016 would be more likely to report zero earnings in the last twelve months than similar respondents interviewed in December of 2016, independent of the price level in the economy as measured by the CPI. In order to ensure the anonymity of individual responses in the PUMS data, however, the U.S. Census Bureau does not adjust each respondent's income (or rent) for inflation based upon the month in which they were interviewed; instead, the identical adjustment is applied for all respondents, whether they were interviewed early or late in the year. If the rate of inflation changed over the course of the year, the dollar figures from PUMS could be biased. Since rent and income are recorded at the same time, the moderate and severe rent burden for lowincome renters, which are also calculated from PUMS data, should not exhibit this bias.

## **Indicator Notes**

#### U.S. Department of Housing and Urban Development Income and Rent Limits

The U.S. Department of Housing and Urban Development (HUD) defines income eligibility limits for its Section 8 and HOME programs based on the area median income (AMI) in a metropolitan area. HUD determines three general income limits at 30, 50, and 80 percent of AMI for various household sizes. HUD does not publish income guidelines for households with more than eight members, although its methodology allows for their calculation. To ease computation, we apply the eight-person limits to these larger households. As of fiscal year 2016, HUD assigned category names to ranges of the area median income:

- Extremely low-income households fall at or below 30 percent of AMI
- Very low-income households have incomes above 30 and at or below 50 percent of AMI
- Low-income households have incomes above 50 and at or below 80 percent of AMI

Table 1: HUD Income Limits and Maximum Affordable Rents for New York City, 2016

We employ HUD's general method to calculate 120 and 165 percent of the area median income for various household sizes. While HUD does not set category names for higher income ranges, we define moderate-income households as those making more than 80 and up to 120 percent of AMI, and middle-income households as earning more than 120 and up to 165 percent of AMI.

Table 1 displays these income limits by household size for fiscal year 2016, not adjusted for inflation, along with the concomitant maximum affordable rents, which are calculated as 30 percent of the income limits. For more information about HUD's method and their published guidelines, refer to individual years' guidelines at http://www.huduser.org/portal/datasets/il.html.

	Extremely Low-Income	Very Low-Income	Low- Income	Low- Income	Moderate- Income	Moderate- Income	Middle- Income
Percentage of HUD Area Median Income	30%	50%	60%	80%	100%	120%	165%
Number of People in Household		l	ncome Limits (No	minal 2016\$)			
1	\$19,050	\$31,750	\$38,050	\$50,750	\$63,400	\$76,100	\$104,650
2	\$21,800	\$36,250	\$43,500	\$58,000	\$72,500	\$87,000	\$119,600
3	\$24,500	\$40,800	\$48,900	\$65,250	\$81,550	\$97,850	\$134,550
4	\$27,200	\$45,300	\$54,350	\$72,500	\$90,600	\$108,700	\$149,500
5	\$29,400	\$48,950	\$58,700	\$78,300	\$97,850	\$117,400	\$161,450
6	\$32,600	\$52,550	\$63,050	\$84,100	\$105,100	\$126,100	\$173,400
7	\$36,750	\$56,200	\$67,400	\$89,900	\$112,350	\$134,800	\$185,350
8	\$40,900	\$59,800	\$71,750	\$95,700	\$119,600	\$143,500	\$197,350
		Maxim	um Affordable Re	nt (Nominal 201	6\$)		
1	\$476	\$794	\$951	\$1,269	\$1,585	\$1,903	\$2,616
2	\$545	\$906	\$1,088	\$1,450	\$1,813	\$2,175	\$2,990
3	\$613	\$1,020	\$1,223	\$1,631	\$2,039	\$2,446	\$3,364
4	\$680	\$1,133	\$1,359	\$1,813	\$2,265	\$2,718	\$3,738
5	\$735	\$1,224	\$1,468	\$1,958	\$2,446	\$2,935	\$4,036
6	\$815	\$1,314	\$1,576	\$2,103	\$2,628	\$3,153	\$4,335
7	\$919	\$1,405	\$1,685	\$2,248	\$2,809	\$3,370	\$4,634
8	\$1,023	\$1,495	\$1,794	\$2,393	\$2,990	\$3,588	\$4,934

In order to calculate the share of rental units that are affordable to households of various income levels, we need to take household size into account, since the definition of income limits (and thus maximum affordable housing costs) vary by household size. For a rental unit with n bedrooms, we classify it as affordable at X percent of AMI if its gross rent is less than the maximum affordable rent specified by HUD for a household of size n+1; that is, a studio (i.e. a unit with zero bedrooms) is classified according to the maximum rent values for single-person households, a one-bedroom is classified according to the maximum rent values for two-person households, a two-bedroom is classified according to the maximum rent values for three-person households, and a unit with three or more bedrooms is classified according to the maximum rent values for four-person households. This method makes assumptions about the composition of the households that occupy each unit. Therefore, this indicator should be interpreted with some caution.

#### Index of Housing Price Appreciation

The index of housing price appreciation is a measure of relative change in property values over time. We construct housing price appreciation indices for four different property types (condominiums, one-family buildings, two- to four-family buildings, and multifamily rental buildings with five or more units) for New York City as a whole and for each borough and community district. Estimating price indices separately for different types of properties allows for different market valuations and fluctuations within each property type. However, because many community districts lack a sufficient number of properties of certain types (for example, there are very few single-family buildings in the Financial District) to be able to estimate reliable housing price indices for those property types, we do not report a price index for all property types for each community district.

The data used to construct the price index come from two sources, both obtained from the New York City Department of Finance. The first data set is an annual sales file, which we receive under an exclusive arrangement. The second data set is the Automated City Register Information System (ACRIS) sales data, which is available online from the Department of Finance. Both data sets contain information on address, price, and date of sale for all transactions involving sales of apartment buildings, condominiums, and single- and multifamily homes in New York City between 1974 and 2017. While the ACRIS data are updated daily, the system contains less information on the circumstances of the sale than the annual sales file. The ACRIS data are used only if the sale is not recorded by the time we receive our annual sales file. The repeat sales price indices are created using statistical regression techniques. Economists use two basic approaches to estimate housing price indices: the hedonic regression (which tries to predict prices based on measurements of the quality of the unit as well as conditions of the surrounding neighborhood) and the repeat sales method. Both of these approaches estimate temporal price movement controlling for the variation in the types of homes sold from period to period. Each method has strengths and weaknesses.

The repeat sales method controls for housing characteristics by using data on properties that have sold more than once. An attractive feature of this method is that, unlike the hedonic approach, it does not require the (necessarily imperfect) measurement of housing unit quality; it only requires that the quality of individual units in the sample did not vary over time. The most important drawback of the repeat sales method is that it is based only on properties that have sold more than once in the study period. Moreover, properties that have been sold more than once may not be representative of all properties in the market, raising concerns about sample selection bias. However, as the index period lengthens, the proportion of properties that have changed hands multiple times increases. This reduces sample selection bias but exacerbates another problem: Case and Shiller (1989) present evidence that homes with longer intervals between sales have more volatile changes in price, since the longer the time between sales, the more likely it is that some external shock to the property itself or the surrounding buildings has, independent of the price level of housing in the neighborhood, significantly affected prices. This report overcomes most of the problems associated with the repeat sales method. Specifically, the data set used here is quite large, so we lose little precision by eliminating properties that sold only once: in the 40 years captured by our data, 61 percent of residential lots changed hands at least twice by the end of 2012. In addition, we use the three-step procedure suggested by Case and Shiller

(1989) and modified by Quigley and Van Order (1995) to account for the possibility that price changes are more volatile (that is, have higher variances) for properties that are sold less frequently.

In the first stage, the difference between the log price of the second sale and the log price of the first sale is regressed on a set of dummy variables, one for each year in the sample except for the base year (2000, when our index is set to equal 100). For each pair of sales for a property, the dummy variables have values of +1 for the year of the second sale, -1 for the year of the first sale, and zeros otherwise. In the second stage, we calculate the squared difference between the sale price predicted by the first stage and the actual sale price and regress it on a constant term, the time interval between sales, and that time interval squared. This allows us to predict the variance of the differences between the prices predicted by the stage-one regression and the actual prices. In other words, we can predict how reliably the change in prices for a single property reflects price changes for properties overall. In the third stage, the stage-one regression is re-estimated by generalized least squares, weighting each observation by the inverse of the square root of the variance predicted by the stage-two regression. Essentially, we give lower weight to price changes for properties that, because there was a large time interval between sales, are more likely to reflect some fundamental change in the quality of the property itself or the immediately surrounding area and thus less likely to accurately reflect changes in the housing market overall.

#### Mortgage Lending Indicators

The Federal Home Mortgage Disclosure Act (HMDA) requires financial institutions with assets totaling at least \$44 million as of 2016 to report information on loan applications and originations if they have originated or refinanced any first-lien home purchase loans on one- to four-family properties (including condominium and co-op units) in the previous year. Thus, the HMDA data capture most, but not all, one- to four-family residential mortgage lending activity. We use this dataset to calculate the home purchase loan rate, the refinance loan rate, and a number of derivative indicators. All figures in our analysis are based on non-business-related loans on owner-occupied, one- to four-family properties (including condominiums).

We exclude from our analysis any loans for manufactured or multifamily rental housing (with five or more units), loans on properties that are not owner-occupied, and any loans deemed to be business related (classified as those loans for which a lender reports an applicant's ethnicity, race, and sex as "not applicable"). The loans that we consider constituted about 84 percent of all loan originations in New York City in 2015. Loan applicants were assigned to a racial/ethnic group for purposes of our research based on the first reported race of the primary applicant. However, if the applicant reported his or her ethnicity as "Hispanic" the applicant was classified as Hispanic, regardless of the applicant's reported race. When an applicant provided information to the lender via mail, internet, or telephone and did not provide information on their race, we assigned those loans to the "not reported" racial category.

#### Notices of Foreclosure (Lis Pendens)

We receive data on *lis pendens* (LP) filings from a private vendor, Public Data Corporation. An LP may be filed for a host of reasons unrelated to a mortgage foreclosure, so we use a variety of screening techniques to identify only those LPs related to a mortgage. These techniques include searching for words within either of the party names and dropping any LPs that relate to a tax lien or a mechanic's lien, or that are originated by a government agency. If the same property receives any additional LPs within 90 days of the initial LP, the additional LPs are not included in our rate to avoid counting the same foreclosure twice.

#### **Properties that Entered REO**

The data for this indicator come from two sources—LPs from Public Data Corporation and residential sales data from the New York City Department of Finance. Each of these datasets identifies properties using a unique borough, block, and lot number (BBL). Starting with the set of all LPs, we use BBLs to match each LP issued since 1993 with the most recent sale of that property prior to the LP (if the sale happened in 1974 or later). We then match the LP to any sales that occurred within three years from the date of the LP, and assume that the first such sale was undertaken in response to the foreclosure filing. To identify transfers into REO, we search the grantee name field of the first sale after the LP for the word "bank" or the name of any large bank or subsidiary. Finally, we check if the name of the grantee matches the name of the LP servicer. If this is the case we classify the sale as a transfer into REO.

#### Units Authorized by New Residential Building Permits

This indicator measures the number of residential units in proposed developments approved by the New York City Department of Buildings (DOB). We compile this indicator from job filings and permit approvals from DOB, which are publicly available on New York City's Open Data website. In New York City, developers file a job with DOB early in the development process. These records include many details about development projects, including its extent (for example, if a project is a new building or alters an existing one) and, for residential projects, the number of housing units it will contain when complete. Because developers can file jobs long before DOB allows construction to begin, and our source of job filings rarely includes the date that a project is fully permitted, we must also collect permit data. Permits, which are associated with jobs, represent partial or entire approvals of development projects. Permits allow us to count only the projects in which DOB has approved structural work, so construction of those buildings is likely to occur. Because permits lack certain information about projects-the number of proposed housing units, in particular-we must merge some detail from jobs to permits. We consider only permits that meet the following criteria:

- The project will result in a new building (job type is "NB");
- The permit authorizes structural work (permit type is "NB");
- The development includes residential uses;
- The permit does not renew a previously approved permit (filing status is "initial");
- No other permit was filed for the same site during the previous calendar year.

When multiple permits on the same site (with the same building identification number, or BIN) meet these criteria, we count just the most recently issued permit. Thus, each permit we retain should represent a unique residential building project. The matching process for permits and jobs is somewhat imperfect. We are able to link most but not all permits to their associated jobs, because our data source does not include all job filings. When we cannot find a permit's matching job, we instead match the permit to the most recently filed job on the same BIN as the permit, as long as the job was filed no more than four years before the permit, and the job includes the number of units proposed for the site. In 2017, we counted 1,781 permits approved for new residential buildings; of that number, we matched 1,319 permits to their associated job and 266 permits to a recently filed job on the same site. We could not match 196 permits to jobs and therefore did not find the number of units proposed for those developments. Accordingly, our measure may somewhat understate the number of units in the construction pipeline.

#### **Calculating Distances to Parks**

For New York City, each borough, and each community district, we report the percentage of housing units within one-quarter mile of a park. To calculate this, we first obtained a shapefile from the New York City Department of Parks and Recreation describing the geographies of "functional parkland" overseen by the department. We then combine this with a shapefile from the New York State Office of Parks, Recreation, and Historic Preservation containing the geographies of state-owned parks. Any park the city categorizes as "undeveloped," a "lot," a "mall," a "parkway," or a "strip" is excluded from the analysis, as are parks smaller than a quarter of an acre. Because neither the city's nor the state's datasets contain information on the location of park entrances, we identify entrance points along each park's perimeter that constitute our best approximation of actual park entrances and then calculate walking distances from those entrance points. For parks with an area of less than two acres, we assume each vertex of the park polygon approximates a park entrance; since these parks are small, the actual location of entrances does not have a large effect

on the walkshed (that is, the area reachable by walking a quarter mile or less along pedestrian rights-of-way starting at any of a park's entrance points). For parks of two acres or larger, the vertices may be too far apart to realistically approximate actual park entrances; for example, the four corners of Central Park are a very poor estimation of the entrances to the park. Thus, we instead find all the intersections of pedestrian rights-of-way that fall within 150 feet of the perimeter of these larger parks to approximate the entrance points. We obtained the pedestrian rights-ofway data from the New York City Department of City Planning's LION geodatabase of public streets. After we generate approximate park entrance points, we use Esri ArcMap's Network Analyst tool to generate walksheds estimating the areas along pedestrian rights-of-way that are located within a quarter mile of a park entrance point. In ArcMap we then select all building lots (which we get from the New York City Department of City Planning's MapPLUTO data) that fall within these walksheds and sum the total number of residential units on such lots and divide that number by the total number of residential units in a given geographic area.

#### **Calculating Distances to Subways**

For New York City, each borough, and each community district, we report the percentage of housing units within one-half mile of a subway station or rail entrance. To determine walking distances, the Furman Center uses the New York City Department of City Planning's LION geodatabase of public streets to create network buffers of streets with pedestrian rights of-way within one-half mile of a subway entrance. Using geographic information systems (GIS), we then selected the lots that fell within this network buffer. We used a data set of station entrances in the Bronx, Brooklyn, Manhattan, and Queens from the Metropolitan Transit Authority through NYC DataMine. This dataset includes the following Metropolitan Transit Authority (MTA) constituent agencies: New York City Subway, Long Island Rail Road, and Metro-North Railroad. For the Staten Island Railway, we estimated station entrance locations using a variety of GIS techniques including current satellite imagery. Amtrak, PATH and New Jersey Transit stations are implicitly included in this calculation because their stations are co-located with stations within the systems named above.

#### **Aggregating Student Performance**

The New York City Department of Education publishes school-level proficiency rates every year. We joined the proficiency data with a school facilities shapefile provided by the New York City Department of City Planning's Bytes of the Big Apple website, which also includes the community district the school falls into. We removed private and charter schools and then summed up the number of fourth graders scoring "proficient" in math and English language arts, and the number of students who were tested in each subject. We use those aggregates to calculate proficiency rates at the community-district level. Because students can attend schools outside of their community district (for example, if their school zone extends beyond the borders of their community district), the student performance indicators provide information about the performance of students who attend schools in that neighborhood, rather than the performance of students who live in that neighborhood.

#### Inflation Adjustments

Unless stated otherwise, when reporting dollar-denominated indicators, we adjust amounts to 2017 dollars using the Consumer Price Index for All Urban Consumers (Current Series) without seasonal adjustments from the Bureau of Labor Statistics over all major expenditure classes for the New York City metropolitan area. This allows for more consistent comparisons across years for individual indicators.

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## New York City Community Districts



### New York City Sub-Borough Areas

